

Name _____ Date _____ Period _____

Chapter 9 Concept Review

B I O L O G Y

Directions: Answer the following questions using your notes and textbook

1. Scientists use several techniques to _____ DNA
2. DNA is a very _____ molecule
3. Use _____, _____, and _____ as tools to study DNA
4. Led to many biotechnology applications- _____ engineering, DNA _____, cloning, etc.)
5. _____ enzymes cut DNA at specific sites
6. Restriction maps show the _____ of DNA fragments
7. _____ - technique using electric current to separate mixture of DNA fragments from each other
8. A _____ could change a restriction site and result in different fragments.
9. Polymerase chain reaction (PCR)- technique used to make _____ of specific DNA sequence.
10. A DNA _____ is a type of restriction map
11. Every individual (except identical twins) has a _____ set of DNA
12. A DNA fingerprint is a representation of parts of individuals DNA that can be used to identify a person a _____ level
13. Gel electrophoresis used to look for different _____ and _____ of fragments
14. DNA fingerprinting used in _____ cases (crimes, paternity cases, studying genetic diversity)
15. _____ - genetically identical copy of gene or of an organism
16. In mammals- scientists swap _____ between cells
 - a. Unfertilized _____ taken from animal

b. Eggs _____ removed

c. nucleus of animal to be cloned in _____ into egg

d. After embryo grows for a couple days is _____

17. _____ became first cloned mammal (sheep)

18. Genetic _____ - changing of an organisms DNA to give new trait

19. Genetic engineering produces organisms with new _____

20. _____ organisms- has one or more genes from another organism inserted into its genome.

21. _____ involves the study of genes, gene functions, and entire genomes.

22. All studies of genomics begin with gene sequencing- determining the order of DNA _____ in genes or genomes

23. Human _____ Project- Completed mapping and sequencing of human DNA in 2003

24. Genetic screening- process of testing DNA to determine risk of having or passing on a _____ disorder.

25. Gene _____ is the replacement of faulty genes